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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,703	09/15/2003	Zhidan Cheng	200-10900 (PB030016AF)	1029

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EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,703	CHENG ET AL.	
	Examiner	Art Unit	
	ROBERT W. WILSON	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 & 13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the appeal filed on 2/11/08, PROSECUTION IS HEREBY REOPENED as set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Jay Patel

/JAYANTI K PATEL/

Supervisory Patent Examiner, Art Unit 2619

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(B) as being anticipated by Bhatia (U.S. Patent No.: 6,023,724)

Referring to claim 1, Bhatia teaches: a device (ISDN LAN Modem show per Fig 2C and shown in more detail in Figure 3) comprising: a bus (390 per Fig 3); a plurality of first line cards (340 per Fig 3) connected to the bus (390 per Fig 3) each first line card having a plurality of local ports the plurality of local ports being associated with a plurality of customer device (Ethernet ports 15a-15d per Fig 3 are connected to Users shown per Figure 2C or plurality of customer device) that have a plurality of IP addresses (There are a plurality of IP address for assignment to the ports associated with workstations and users per col. 4 lines 45 to col. 5 line 67 and col. 11 line 1 to col. 12 line 67)

A second line card (ISDN Interface per Fig 3) connected to the bus (390 per Fig 3) having a network ports that is connectable to a network segment (40 per fig 3) the network port having an IP address and a subnet mask (col. 4 line 45 to col. 5 line 67 and col. 11 line 1 to col. 12 line 67), the subnet mask of the network port identifying a range of IP address from the IP address of the network port, the range of the IP addresses including all of the plurality of IP address of the plurality of customer devices (The ISDNB interface assigns its own IP address and subnet mask so work station associated with the Ethernet are on the same subnet so therefore, the mask defines the range of addresses per col. 4 line 35 to col. 5 line 67 and col. 11 line 1 to col. 12 line 67)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-7, 13-22, & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia (U.S. Patent No.: 6,023,724) in view of Kang (U.S. Patent Pub. No.: 2003/0220111)

Referring to claim 2, Bhatia teaches: the device of claim 1 and wherein local ports are only connectable to a plurality of Ethernet per Fig 3.

Bhatia does not expressly call for: local ports are connectable to a modems

Kang teaches: local ports connectable to modems (Pg 2 Para [0028] to

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the modems of Kang in place of the Ethernet ports of Bhatia in order to extend the range that workstations can be connected to the router.

In addition Bhatia teaches:

Regarding claim 3, wherein the second line card receives message from the network segment the second line card forwards the message with IP address that match the IP address of the plurality of customer device to the first line cards (ISDN interface or second line card receives a packet or message from the ISDN interface then the packet is forwarded to the user based upon IP address per col. 11 line 1 to col. 13 line 67)

Regarding claim 4, wherein each first and second line card maintains a table that indicates that each of the IP address that are associated with each of each first and second line card (The LAN router has a ISDN Interface or first and Ethernet Hub or second line card per Fig 3 and share a list or private IP addresses or a table per col. 11 line 65 to col. 12 line 44)

Regarding claim 5, wherein when a first local port of a first line card is associated with a first customer device that has a first IP address the first line card identifies message on the bus that are directed to the first IP address forward the message to the first local port (When one of the local modem ports on the modem or line card which is connected to a workstation or user receives a packet of message with a destination address that is directed to the IDSN Interface then the packet is forwarded on bus (390 per Fig 3) per col. 11 line 1 to col. 14 line 10)

Regarding claim 6, wherein when a first local port of a first line card is associated with a first customer device that has a first IP address, the first line card receives message form the first customer device, and forward the message to the second line card via the bus (When one of the ISDN Interface or second line card via the bus (390 per Fig 3) per col. 11 line 1 to col. 14 line 10)

Referring to claim 7, Bhatia teaches: the device of claim 1 and a first line card per Fig 3

Bhatia does not expressly call for: first line card include xDSL line cards

Kang teaches: first line card includes xDSL cards (Pg 2 Para [0028] to

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the xDSL of Kang in place of the Ethernet Hub of Bhatia in order to extend the range that workstations can be connected to the router.

Referring to claim 13, Bhatia teaches: a method (Fig 2a & Fig 3 perform the method)

Receiving a message addressed to one of a plurality of a customer devices, the plurality of the customer devices to be connected to a plurality of Ethernet ports the plurality of Ethernet ports to be connected to a plurality of first line cards the plurality of first line cards to be connected to a second line card that received the message the message having an IP address and a subnet mask the plurality of customer devices having a plurality of IP address (314 per Fig 3 receives a message addressed to user per Fig 2C. The user are connected to a plurality of ethernet hubs per Fig 3. The plurality of Ethernet hubs are connected to 312 per Fig 3 or first line cad. The plurality of 312 per Fig 3 or first line card are connected to 314 per Fig 3 or second line card. The message received is an ARP response per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col 14 line 10.

Identifying a complete IP address from the IP address and the subnet mask of the message (CPU identifies that the ARP response provides an IP address and subnet mask per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col 14 line 10.)

Determining if the complete IP address is identical (CPU determines if the IP address provided back in the ARP response id identical static IP addresses which were preassigned per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col. 14 line 10)

Bhatia does not expressly call for: modems

Kang teaches: modems (Pg 2 Para [0028] to

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the modems of Kang in place of the Ethernet Hub of Bhatia in order to extend the range that workstations can be connected to the router.

In addition Bhatia teaches:

Regarding claim 14, wherein the plurality of customer devices includes a first customer device having a first IP address and a second customer device having a second IP address (The plurality of users or customer device per Fig 2C. A first user has an IP first IP address and a second user has a second IP address per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col. 14 line 10)

Regarding claim 15, further comprising : forwarding the message to the first line card of the plurality of first line card when the complete IP address exactly matches the first IP address of the first customer device (The packet is forwarded to 312 per Fig 3 wherein if the destination IP address matches the IP address of a first user per Fig 2C and per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col. 14 line 10)

Forwarding the message of to the first line card of the plurality of first line card when the complete IP address exactly matches the second IP address of the second customer device. The

packet is forwarded to 312 per Fig 3 when the IP address matches the IP address of a 2nd user per Fig 2C per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col. 14 line 10.

Regarding claim 16, wherein each first line card of the plurality of first line cards includes a plurality of local ports that are associated with a number of IP address of a number of customer devices of the plurality of customer devices (Each 312 per Fig 3 or first line card includes an association with a port connected to a user or local ports each of which has an IP address per col. 4 line 45 to col. 5 line 67 and per col. 11 line 1 to col. 14 line 10)

Each first line card of the plurality of first line card maintains a table that includes each port of each first line card and an associated IP address of a customer device for each port of each first line card that has an associated customer address (Each of the first 312 per Fig 3 or line cards maintains a table for associated of the IP address with each local user ports that share a list or private IP addresses or a table per col. 11 line 65 to col. 12 line 44)

Referring to claim 17, Bhatia teaches: a device (ISDN LAN Modem show per Fig 2C and shown in more detail in Figure 3) comprising: a plurality of first line cards each of the first line card having a plurality of local ports the plurality of local ports being associated with a plurality of customer device that have a plurality of IP addresses (Ethernet ports 15a-15d per Fig 3 are connected to Users shown per Figure 2C or plurality of customer device that have a plurality of IP addresses (There are a plurality of IP address for assignment to the ports associated with workstations and users per col. 4 lines 45 to col. 5 line 67 and col. 11 line 1 to col. 12 line 67)

A second line card (ISDN Interface per Fig 3) connected to the plurality of first line cards (Ethernet Hubs per Fig 3) the second line card having a network port to be connected to a network segment having a network ports that is connectable to a network segment (ISDN Interface or second line card has a port 40 which is connected to a network segment) the network porting having an IP address and subnet mask of the network port, the range of IP address including all of the plurality of IP address of the plurality of customer devices (The ISDN interface assigns its own IP address and subnet mask so work station associated with the Ethernet are on the same subnet so therefore, the mask defines the range of addresses per col. 4 line 35 to col. 5 line 67 and col. 11 line 1 to col. 12 line 67)

Referring to claim 18, Bhatia teaches: the device of claim 18 and wherein local ports are only connectable to a plurality of Ethernet per Fig 3.

Bhatia does not expressly call for: local ports are connectable to a modems

Kang teaches: local ports connectable to modems (Pg 2 Para [0028] to

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the modems of Kang in place of the Ethernet ports of Bhatia in order to extend the range that workstations can be connected to the router.

In addition Bhatia teaches:

Regarding claim 19, wherein the second line card forwards a first message to a first line card when the first message includes a first IP address that falls within the range of IP address (ISDN Interface of second line card forwards the packet to the plurality of modem or first line card when the IP address falls within the subnet mask range per col. 4 line 35 to col. 5 line 67 to col. 11 line 1 to col. 12 line 67)

Regarding claim 20, wherein the second line card forwards a second message of the first line card when the second message includes a second IP address that falls within the range of the IP addresses (ISDN Interface of second line card forward a packet of the modem or second line card when the packet includes the IP address which falls within the range of IP address per col. 4 line 35 to col. 5 line 67 to col. 11 line 1 to col. 12 line 67)

Regarding claim 21, wherein when the first local port of the first line card is associated with a first customer device that has the fir tip address the first line card identifies message form the second line card that are address to the first IP address and forward the message to the first local port (The first user port on the modem is associated with a first work station that has a destination IP address. The modem or first line card associates with the first user or first customer that has the destination IP address or first IP address. The modem or first line card identifies the packet form the ISDN LAN Interface or second line card that are addressed to the first customer or first IP address and forwards the packet to the first user port per col. 4 line 35 to col. 5 line 67 to col. 11 line 1 to col. 12 line 67)

Regarding claim 22, wherein when the second local port of the first line card is associated with a second customer device that has the second IP address, the first line card identifies message form the second line card that are directed to the second IP address and forward the message to the second local port (Second user port on modem card or first line card that is associated with second user or second customer that has a destination IP address. The modem or first line card identifies the packet of the IDSN LAN interface or second line card form the IP destination address and forwards the packet to the second user port per col. 4 line 35 to col. 5 line 67 to col. 11 line 1 to col. 12 line 67)

Referring to claim 24, the combination of Bhatia and Kang teach: the device of claim 22 and Bhatia teaches: a first line card per Fig 3

Bhatia does not expressly call for: first line card include xDSL line cards

Kang teaches: first line card includes xDSL cards (Pg 2 Para [0028] to

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the xDSL of Kang in place of the Ethernet Hub of Bhatia and Kang in order to extend the range that workstations can be connected to the router.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia (U.S. Patent No.: 6,023,724) in view of Kang (U.S. Patent Pub. No.: 2003/0220111) further in view of Aiken (U.S. Patent No.: 6,430,622)

Referring to claim 23, the combination of the Bhatia and Kang teach: the device of claim 22 and Bhatia teaches: a Second line card that outputs information to the network segment via network port per Fig 3

The combination of the Bhatia and Kang do not expressly call for: advertising the IP address and subnet mask

Aiken teaches: advertising the IP address and subnet mask col. 10 lines 12 to 20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the advertising the IP address and subnet mask of Aiken to the system of the combination of the Bhatia and Kang in order to build a system which can interoperate with RIP or OSPF routing protocols

Response to Amendment

6. Applicant's arguments with respect to claims 1-7 & 13-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT W. WILSON whose telephone number is (571)272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571/272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert W Wilson/
Primary Examiner, Art Unit 2619

RWW
5/28/08